



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,402	12/21/2000	Roy R. Fleshman	89.0426	1133

7590 03/18/2003
Patent Counsel
Schlumberger Reservoir Completions
Schlumberger Technology Corporation
P.O. Box 1590
Rosharon, TX 77583-1590

EXAMINER

LAM, THANH

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/745,402

Applicant(s)

FLESHMAN ET AL.

Examiner

Thanh Lam

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE 1/8/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-14, 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 7-13, and 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Ekstromer.

Ekstromer discloses an electric motor, comprising: a plurality of motor sections (22), wherein the plurality of motor sections are mechanically and electrically coupleable (see fig. 4), each motor section including a modular rotor section and a modular stator section (17); and a bottom motor section (see fig. 2 next to 23 where winding 25 couple) electrically coupleable to one of the plurality of modular motor sections to electrically couple the modular stator sections together to form a stator (lines 97-100).

Regarding claim 2, Ekstromer discloses the plurality of motor sections includes: a first motor section having a first modular rotor section and a first modular stator section; and a second motor section having a second modular rotor section coupleable to the first modular rotor section and a second modular stator section electrically coupleable to the first stator section, wherein electricity flowing through the first and second modular stator sections produces a magnetic field to impart rotative motion in the rotor.

Regarding claim 7, Ekstromer discloses at least one modular stator section has a plurality of conductors (38) terminating at a plurality of corresponding protrusions (37).

Regarding claim 8, Ekstromer discloses at least one other modular stator section includes a plurality of conductive elements (38) configured for engagement with the plurality of corresponding protrusions (37) when the plurality of motor sections are mechanically coupled.

Regarding claim 9, Ekstromer discloses the plurality of conductive elements each include a hollow receptacle (36) configured to receive a corresponding protrusion (37).

Regarding claim 10, Ekstromer discloses a separate coupler (37) disposed between the first and second motor sections to provide a mechanical and electrical coupling.

Regarding claim 11, Ekstromer discloses at least one of the plurality of motor sections includes an outer housing (22) having a threaded collar (thread portion to match with bolt 39) designed to engage an outer housing of the next sequential motor section.

12. (Second Amended) A submersible pumping system, comprising: a submersible electric motor, comprising: a plurality of motor sections, wherein the plurality of motor sections are mechanically and electrically coupleable to form a motor (lines 97-100) of a desired length, each motor section comprising: a modular rotor section (24) coupleable to an adjacent modular rotor section of an adjacent motor section to form a rotor (lines 97-100); and a modular stator section coupleable to an adjacent modular stator section of the adjacent motor section; and a bottom motor section (see fig. 2 next to 23 where winding 25 couple) coupleable to one of the plurality of modular motor sections to complete electrically a stator formed by the plurality of modular stator sections and the bottom motor section; and a submersible pump (12) drivingly coupled to the rotor of the submersible electric motor.

Regarding claim 20, Ekstromer discloses a third motor section adapted to complete electrically the single stator formed by the first modular stator section and the second modular stator section.

Regarding claim 21, Ekstromer discloses each modular stator section comprises a first stator winding extending linearly through the modular stator section to a second stator winding extending linearly through an adjacent modular stator section.

Regarding claim 22, Ekstromer discloses the modular stator sections are coupled electrically in series.

Regarding claim 23, Ekstromer discloses an electric motor, comprising: a plurality of motor sections, wherein the plurality of motor sections are mechanically and electrically coupleable to form a motor (lines 97-100) of a desired length, each motor section including a modular rotor section and a modular stator section having conductors extending longitudinally therethrough to produce a rotating magnetic field to impart rotative motion to a rotor disposed therein.

Regarding claim 24, Ekstromer discloses the plurality of modular stator sections are adapted to form a single stator when electrically coupled in series.

Regarding claim 25, Ekstromer discloses a bottom motor section adapted to complete electrically the modular stator sections.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2834

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ekstromer in view of Schob (pn. 5,939,813).

Ekstromer discloses all aspect of claimed invention except for stator/motor sections are fluidly coupleable to allow a fluid flow therethrough.

Schob (fig. 3) discloses stator sections (3) are fluidly coupleable to allow a fluid flow (7a-c) therethrough, the purpose of the fluid flow is for cooling the stator/motor sections.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the stator/motor sections of Ekstromer to accommodate the stator/motor sections to allow the fluid flows therethrough as taught by Schob. The fluid flows between the stator/motor sections in order to provide an improvement of cooling of the stator sections.

Regarding claim 5, the second motor section (17 of Ekstromer) is fluidly coupleable to an external device (2 of Schob).

Regarding claim 14, a motor protector (32 of Ekstromer), wherein the plurality of motor sections are fluidly coupleable to allow fluid to pass (taught by Schob) between the first motor section and the motor protector.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ekstromer in view of Rabson.

Ekstromer discloses all aspect of claimed invention except for a seal disposed between the first motor section end and the second motor section.

Art Unit: 2834

Rabson disclose a seal (115) for shielding.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the motor sections of Esktromer and disposed the seal as taught by Rabson to improve shielding of the motor sections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (703) 308-7626. The examiner can normally be reached on m-f 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0656.

A handwritten signature in black ink, appearing to read 'Thanh Lam', with a long horizontal line extending to the left.

Thanh Lam
March 16, 2003